Figure 1: Interference after change in geometry
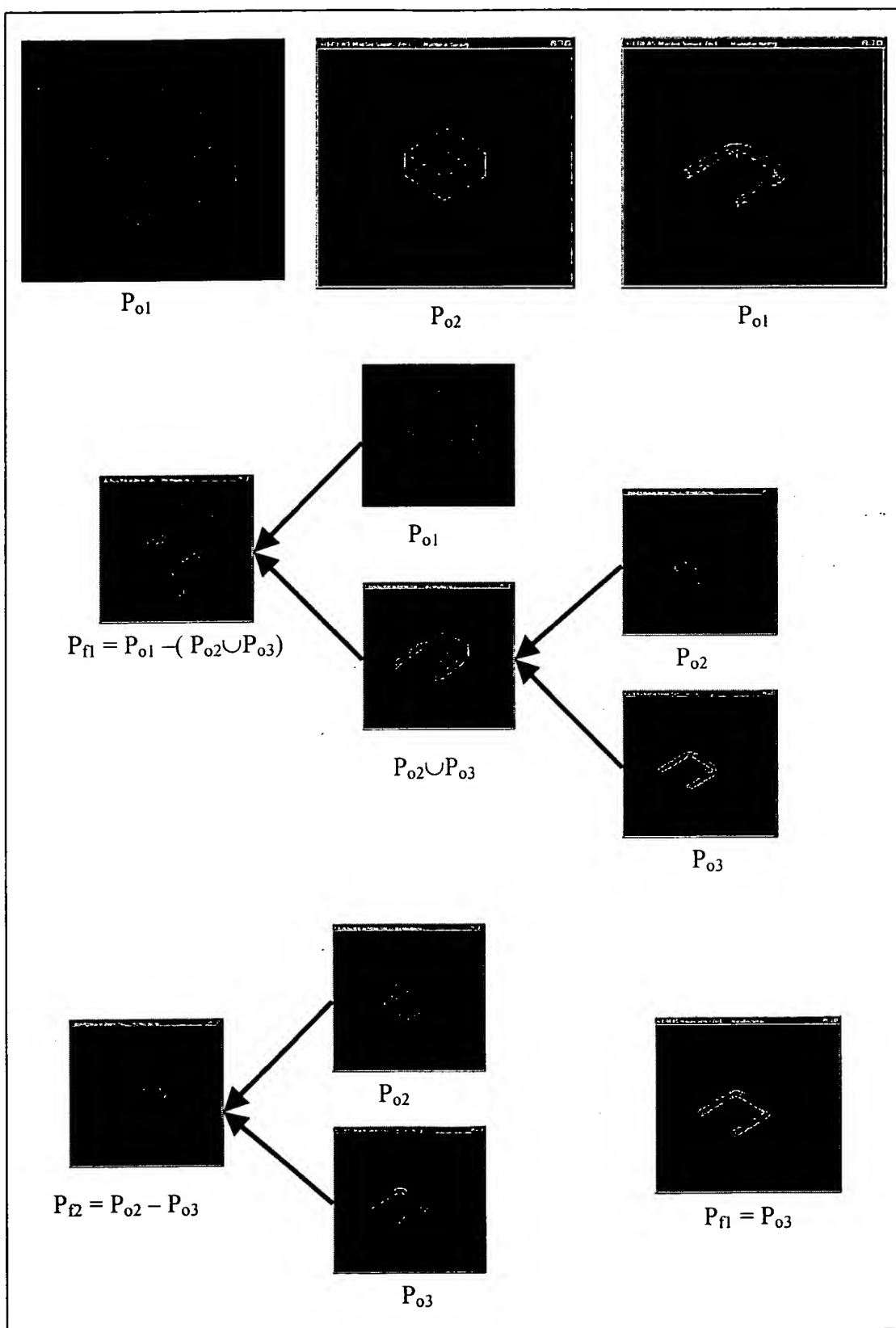
Figure 2: Calculation of multi material geometry

a) 2½D Part to be manufactured

b) 2½D part inverted and subtracted from a block toolpaths are then generated

c) Top view of one layer
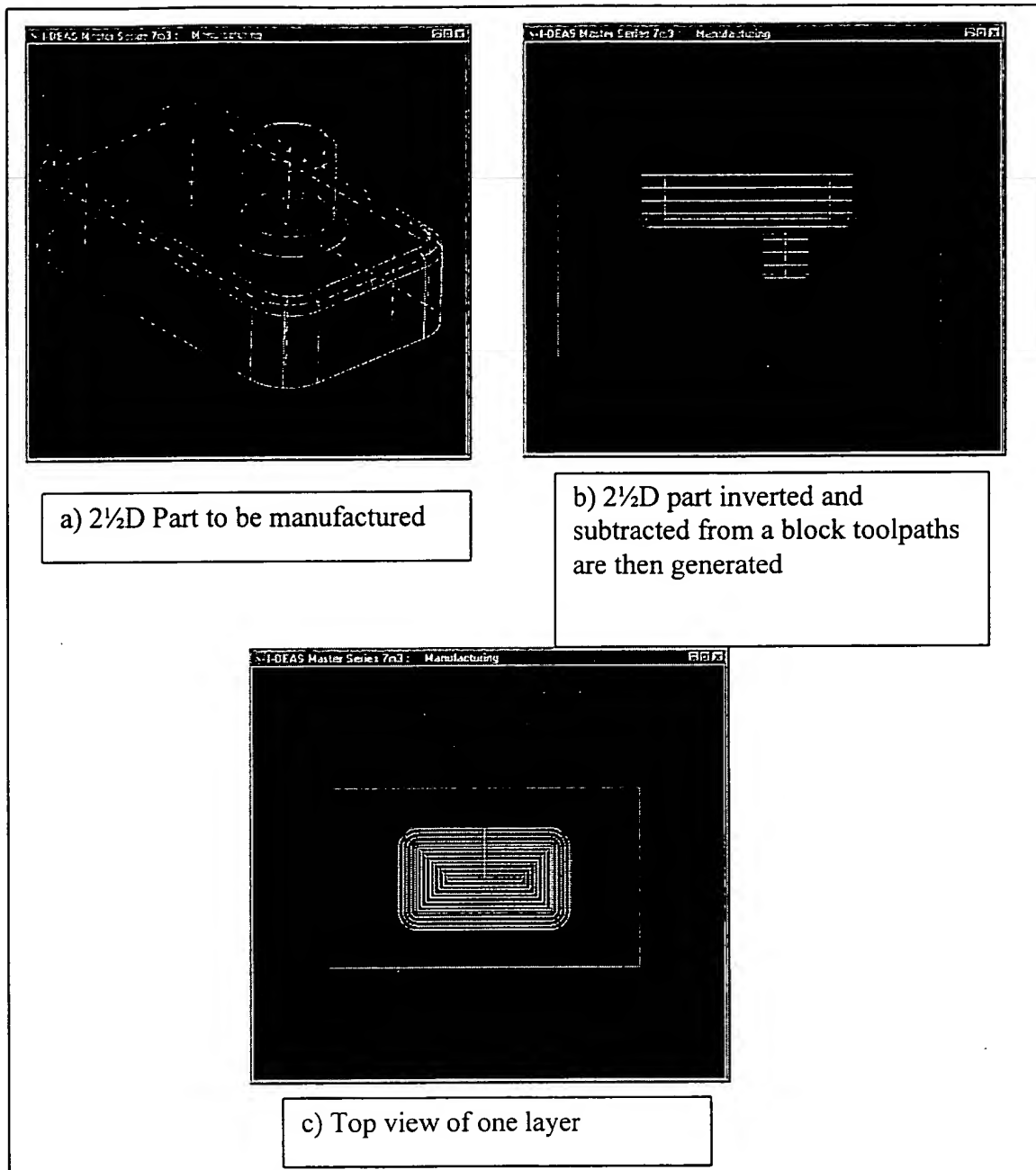
Figure 3: Calculation of tool paths for 2½ D part

a) 3d part with overhanging features

b) Part cut out of block showing resultant overhang

c) Part is split into two subparts such that each has no overhang

d) Toolpaths generated (blue) for each subpart
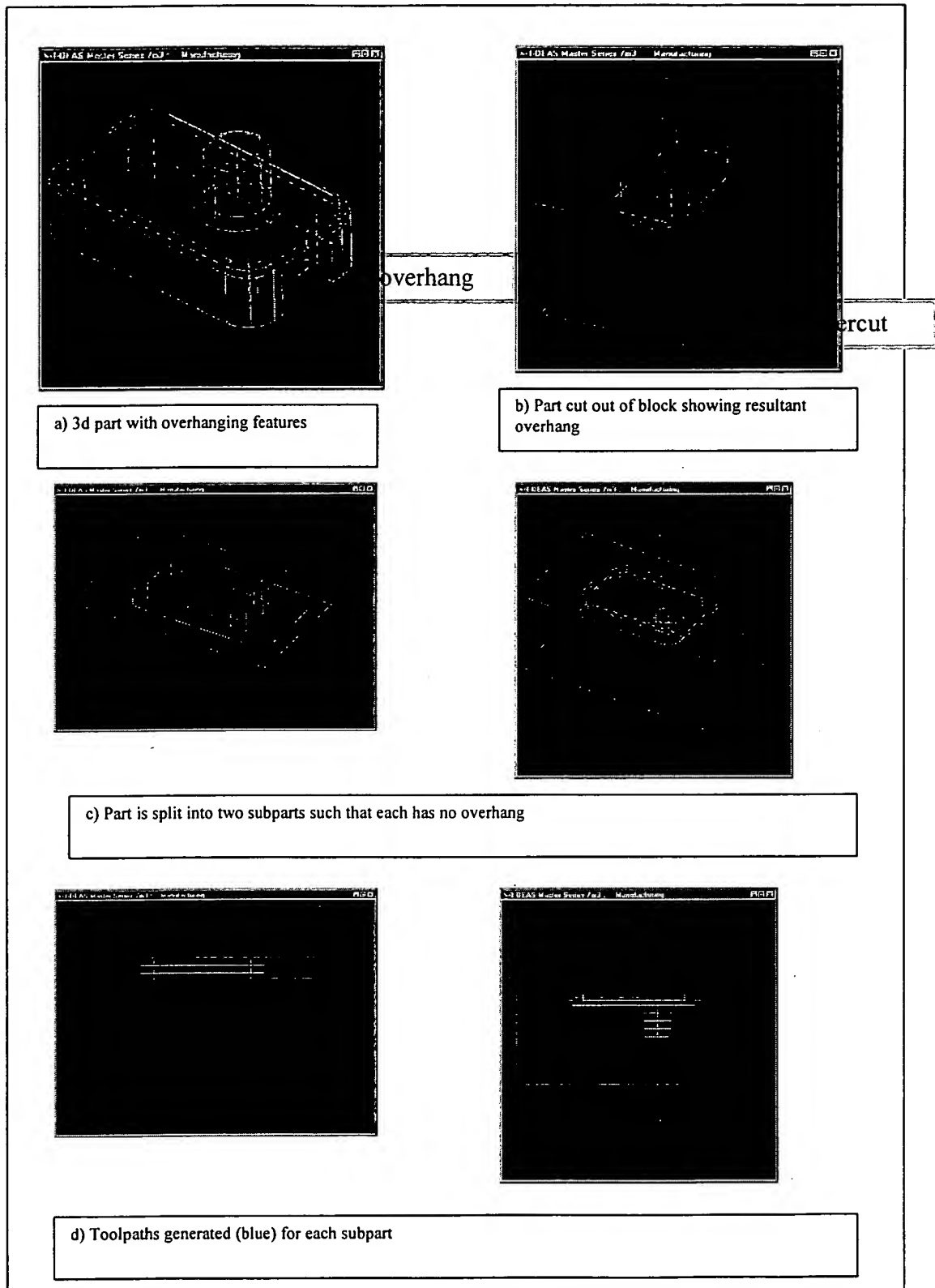
Figure 4: Calculation of toolpaths for part by subdividing into 2 ½ D parts

part
defined as
stock
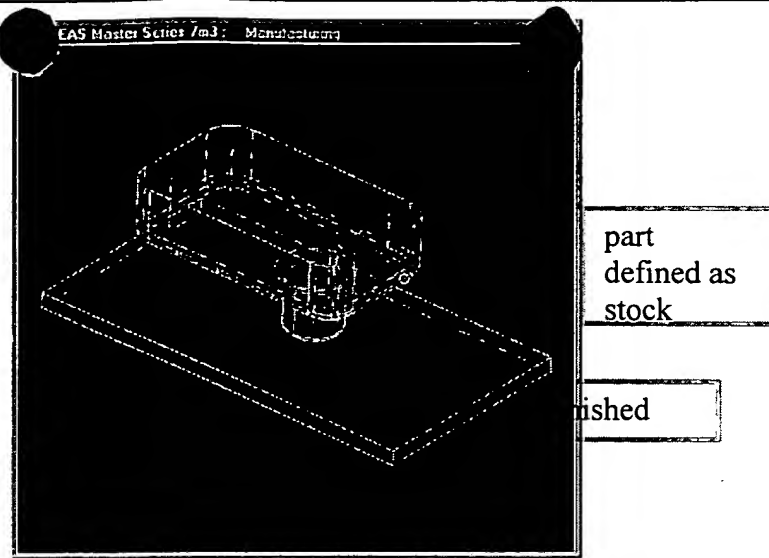
ished

a) Part is inverted and defined as 3D stock material. A square plate is defined as the finished material.
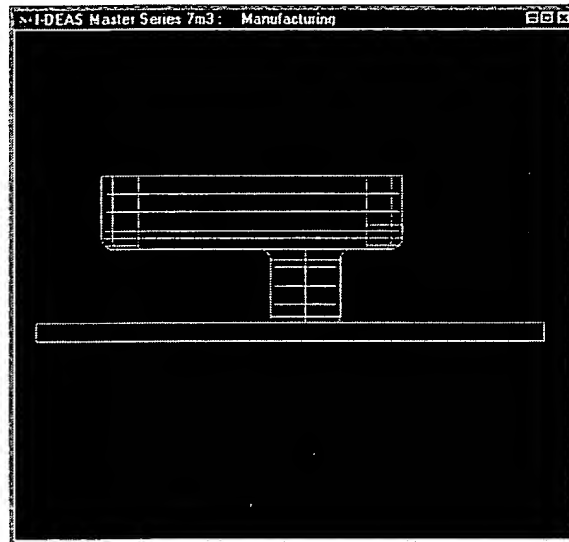
b) Resultant toolpaths generated in green

Figure 5: Calculation of toolpaths by reflecting the part and machining it away

part
defined as
stock

"finished"
part

a) Part to generate toolpaths for is defined as stock material and block is defined as finished surface.
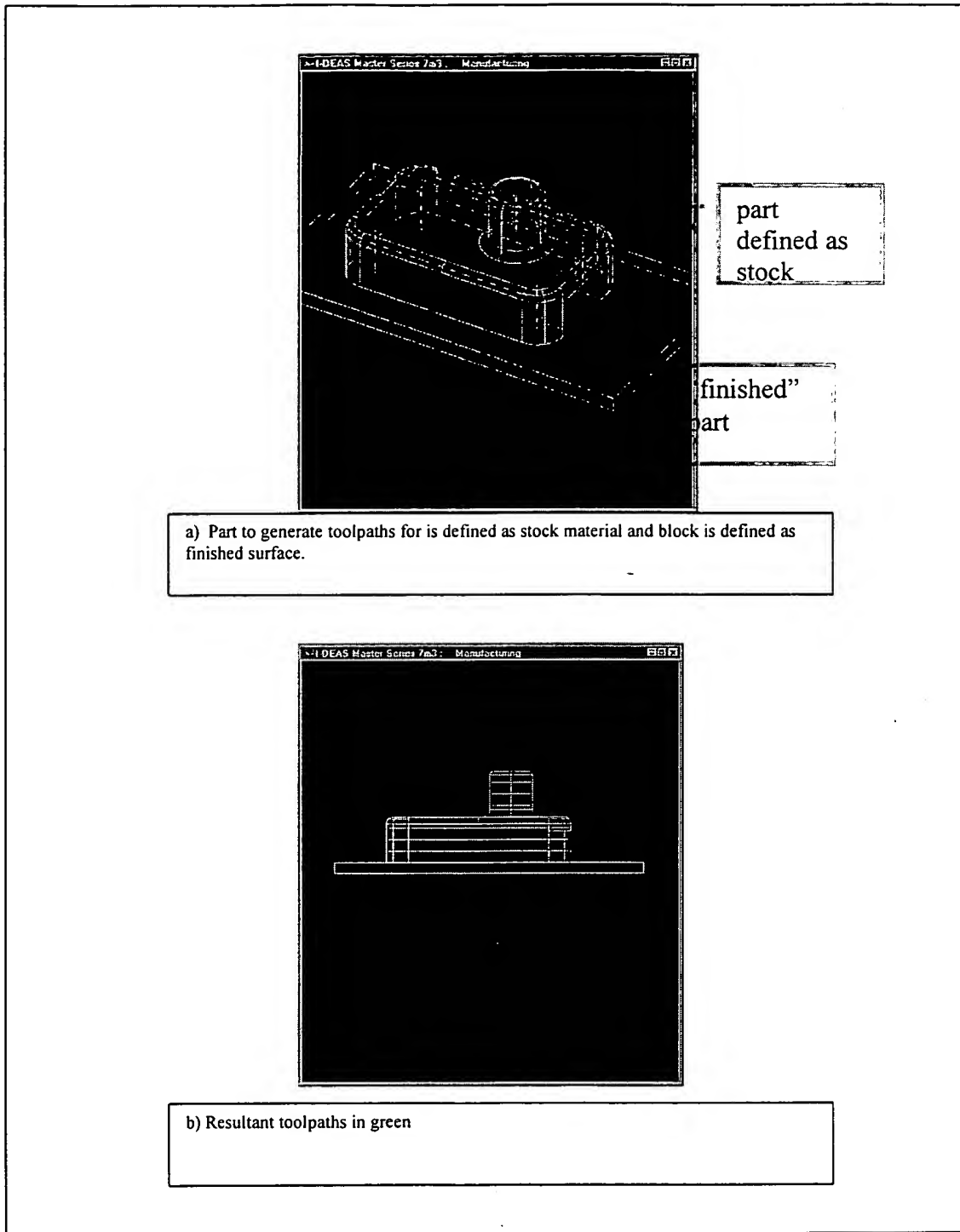
b) Resultant toolpaths in green

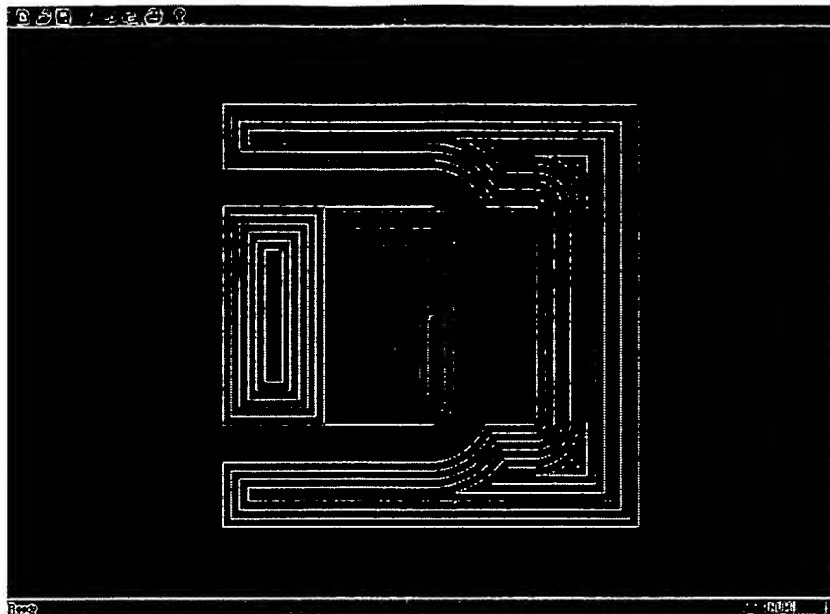**Figure 6: Calculation of toolpaths without reflection. Reordering of toolpaths is done in custom software**

Figure 7 Sample layer at height 26mm showing combination of toolpaths for 3 materials, colored red, green and blue